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A comparative Study of Meta Cognitive Skills of Music Practicing Students and Non-Music Students

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ABSTRACT

This study was carried out on a *sample of 50 subjects* pursuing undergraduate degree courses in History, Sanskrit and Music for fulfilment of basic objective of the study to find out the *effect of musical practice in* increasing the *meta cognitive skills of the subjects*. For this researcher formulated the null hypothesis to fulfilment of objective. The samples were collected through *Simple Random Sampling method*. The samples were administered using the *Meta - cognitive skills scale*. Results reveal that, people who practice music has quality sleep cycle which leads to good meta cognitive skill. When one is practicing to music so, it creates an incredibly powerful effect on human brain. It calms and sooths the nervous system and as well as helps in slow brain ageing.

Key Words: *Meta-Cognition, Indian classical music & Under Graduate students*

INTRODUCTION:

Music which is melody, is an art and science including vocal or instrumental tones or pitches in different chorus symmetry, rhythm, harmony Environmental voices are the part of our everyday existence. We all inspect music as a manner of peace and entertainment, relating it to the healing and therapeutic properties and timber. It completes an emotionally meaningful composition in every aspect.

Meta cognition has been generally defined as thinking about thinking or the ability to recognize own self through self-awareness that is recognizing one's strengths and weaknesses while learning something or anything new. The result also revealed that students with regular sleep disturbances had poor meta cognitive skills and have difficulties in understanding the problem and finding correct answer of any of the problem. Güner & Erbay [1] suggested by the studies that listening to music facilitates the neurogenesis, the regeneration and repair of cerebral nerves by adjusting the secretion of steroid hormones ultimately leading to cerebral plasticity. Fortier-Brochuet. al [2] conducted a study Insomnia and daytime cognitive performance: a meta-analysis and found that our central nervous system is the main highway to information of the human body. Sleep is essential to keep the body in functioning properly but sleep deprivation or sleep disturbance can disrupt how our body usually spend and processes information. During sleep pathways between nerve cells in the brain that makes difficult to concentrate or learn new things. The signals that body sends may also be delayed and hence this leads to decrease in the co-ordination of mind and body. According to Harmat, Takács & Bódizs [3] had analysed the effect of music on the human body and mind. To fact more scientific studies on music have the conducted in recent years, mainly in the field of neuroscience, and the level of intrust among researchers is increasing. The result of past studies has clarified that music influences and affects cranial nerves in human from fetes to adults. Fabiny[4] examined that sufficient quantity and quality of sleep are required in many aspects of amnestic and non-amnestic cognition, most essentially in executive attention, working memory and higher cognitive functions. The amount of sleep required on an average continues to be debated, but it is agreed that people who had extremes of the sleep distributions i.e. short sleepers for 5 hours and long sleepers for more than 9 hours are subjective to cognitive deficits and had a fast cognitive aging. Jancke [5] suggested that the past researches done had clarified that music influences and affects cranial nerves in humans from foetus to adults.

But, despite the best efforts investigator could not find even a single study ofMeta cognitive skills of music practicing students and non – music students.Hence, this study was designed to address this gap, this motivated the investigator to conduct the present research study and this study is a humble attempt to fill in this research gap.

Delimitation of the study: The study conducted is delimited to the students of under-graduation pursuing and History, Sanskrit and Music.

Objective: To assess the relationship between meta cognitive skills of music practicing students and non-music students.

Variables of the study: In the present research study Musical Practice and Non – Music as independent variables whereasMeta – cognitive skills is dependent variable.

Hypothesis: In present research, researcher formulated the following null hypothesis for empirical verification.

H_{01}There is no significant relationship between the metacognitive skills of music practicing students and non – music practicing students.

METHODOLOGY:

Research Design: To meet the objectives, Correlational design used or the data were analyzed and proper statistical techniques used.

Sample & **Sampling:** A sample of 50 students was selected for the present research. The sample was selected to match the study and help in achieving the purpose of the study. Researcher has used Simple random sampling with lottery method for the data collection.

Inclusion & Exclusion Criteria: The under -graduation students from the history, sanskrit and music department are been included.Whereas students from yoga and psychology department are been excluded in the study by the researcher.

Data Collection Procedure: Data were obtained with the prior permission of the H.O.D and explained the aim of research. A request was made to be co-operative in the research work. After that the H.O.D. allowed the researcher to contact the students. The researcher expressed a friendly attitude towards the subject in order to establish a proper rapport with them.

Tool: The tool to be used in the study is Meta -Cognitive Skill Scale which was developed by Prof. Madhu Gupta and Ms. Suman[6]. This scale includes 4 dimensions and those are Planning, Implementation, Monitoring and Evaluation. Items in the scale are 42 items. The reliability of the scale is 0.94 (split – half reliability). The validity of the scale is high construct validity.

Statistical Techniques: Data were analyzed using Microsoft Excel as well as manually. The data were statistically analyzed by independent t-test to test the hypothesis.

RESULT:

H_{01}:-There is no significant relationship between the metacognitive skills of music practicing students and non – music practicing students.

TABLE

Groups	N	M	SD	SE_M	r	SE_D	t-value	Level of Significance
Music practicing	25	175.76	22.15	4.43	0.48	4.12	0.55	Not Significant at 0.05 level
Non- Music	25	173.48	16.00	3.50				

$df = n_1 + n_2-2=48$

INTERPRETATION & DISCUSSION:

The research becomes meaningful only if the data is interpreted and inference is drawn. The present study investigates the aspect of music practice on meta-cognitive Skills of the students. The independent variables being used in this study – *music practice and non -music* and the dependent variable being used in this Study is *Meta-Cognitive Skills.* The sampling method is simple random sampling. Research design being used in this study is Correlational design.

The hypothesis used in this present study is null hypothesis. The hypothesis is –"There is no significant relationship between the metacognitive skills of music practicing students and non – music practicing students".

The hypothesis was not significant at 0.05 level of confidence, but mean difference indicates that there is increase in the level of Meta- cognitive skills of the subjects. It means that practicing to music have shown to activate the different areas of the brain to control the cognition; memory; speech and emotion often all at the same time. Fukui, & Toyoshima [7], studied that the hormone production is dependent on the sleep. And practicing good music helps the testosterone production and need at least uninterrupted sleep of 3 hours that is the time of first R.E.M episode wake up throughout the night could affect hormone production. Music can physically increase brain matter, which could help the brain repair itself. More interesting, is the impact that music can have even in case where the brain may not be functioning as it should. Few Studies show that, for people with Alzheimer's, music can often sport a reaction helping patients access memories that were previously lost. Given the powerful effect that music has on the brain researchers are investigating whether it can be used to treat other different neurological condition- like brain Injury or Parkinson's disease.

CONCLUSION:

The above study was done on the effect of music practice on meta-cognitive skills. The aim of the study was to see the increase in the level of meta-cognitive skills of the subjects. The main difference of the data shorts that there is impact of music practice in increasing the meta-cognitive skills of the subjects. When one practices music so, it creates an incredibly powerful effect on human brain. It can calm and sooth the nervous system as well as slow the brain ageing.

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